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XI. *Remarks and Observations made on board the Ship Kelfall, on a Voyage to Judda and Mocha, in 1769, by the Same.*

Read March 12, 1772. **I**N my run from Socatra to Cape Aden, I made the dist. $8^{\circ} 20'$ W. and from Cochin $29^{\circ} 39'$ W. The latitude of the above Cape is laid down in most books and charts in 13° N. which I find is about 15 miles too much to the northward, according to the observation I took on the 10th of February 1769, as well as three other very good observers: by the medium of the whole we made the latitude $12^{\circ} 41'$ N. the Cape then bore N. N. W. $\frac{1}{2}$ W. dist. 5 miles which gives near $4'$ of latitude; that, added to $12^{\circ} 41'$ N. gives $12^{\circ} 45'$ N. for the latitude of the southernmost point of the Cape.

This cape, or headland, is one of the most remarkable I ever saw, when coming from the eastward; it is so very high and rugged, that it may be seen, I believe, 15 leagues at least, in fine weather. The tops of those ragged rocks resemble so many chimneys and spires; and, as you approach the cape, you see a zigzag wall, or whitish pathway, cut through the rocks, not at a very great distance from the waterside; a little below this, at the S. E. end,

end, you will see something that looks very like two mosques; but this cannot be seen at a greater distance than 4 or 5 leagues; but when it is, you may be certain it is Cape Aden, and may then steer your course for Babelmandel accordingly.

A little to the westward of this cape, there is another high craggy headland, equally high and craggy as that of Aden, between which two there is an opening, very much resembling a small narrow streight, but in reality it is only a deep bay, the bottom of which is very low land, so low, that it cannot be seen from the mast-head, except you are close in shore: by this deception, people have mistaken it for the Streight of Babelmandel, and have been so far embayed, before they perceived their mistake, that it was with the greatest difficulty they got out again.

On each side of this bay lies a large rock, just at the entrance, and at about a quarter of a mile from the shore: when these are seen, you may be sure it is not the Streight of Babelmandel. Was a ship to fall in with this place, and had not had an observation for some days before, I think it would be very easy to mistake one for the other; there is only this difference, that Cape Aden is high and rugged, and Babelmandel is rather low and smooth, and the island (as the Directory observes) makes like a gunner's coin.

The best course to steer from Cape Aden to Saint Anthony is W. by S. by the compass, and that will carry you clear of the shoal lying off that point. I made the distance between Cape Aden and Cape Saint Anthony, by the ship's run, 17 leagues; the latter
cape

Fig. 1.

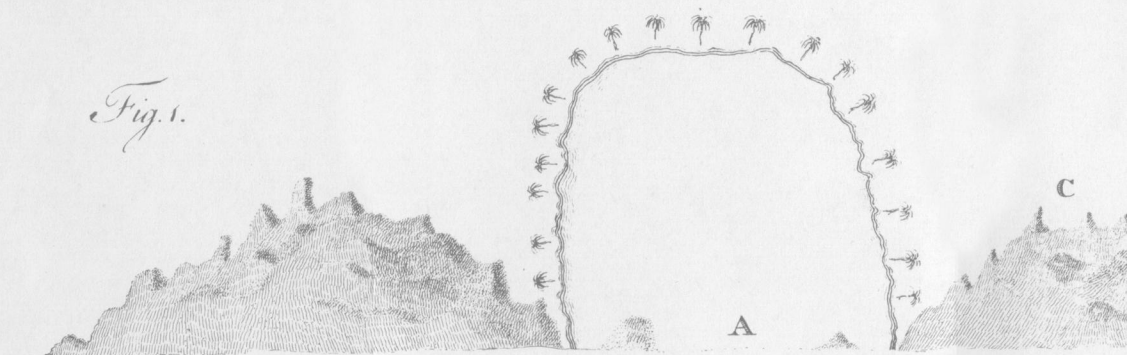


Fig. 3.

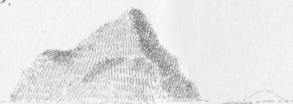


Fig. 2.

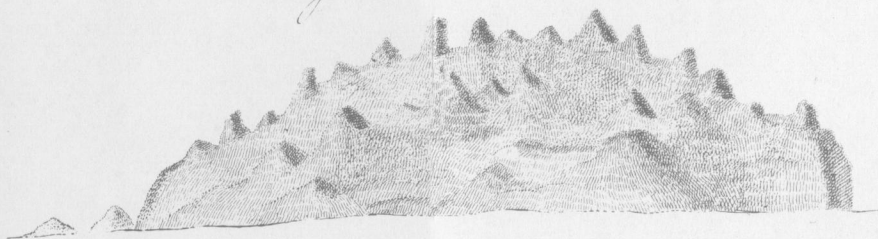
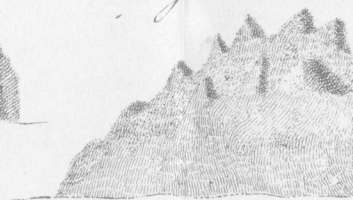
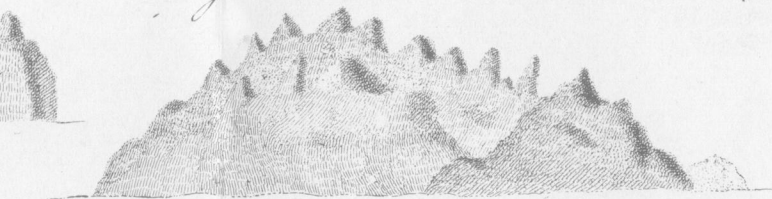
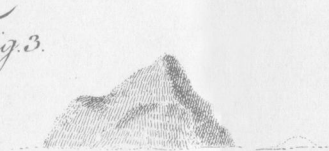
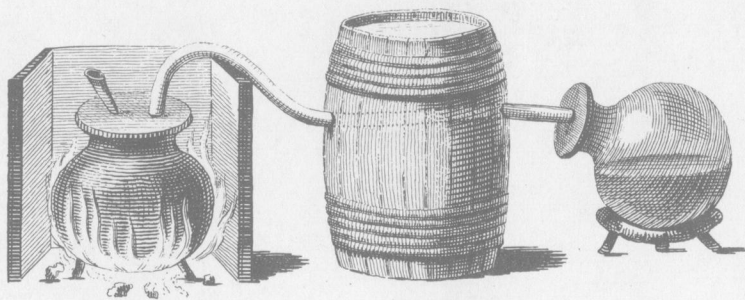
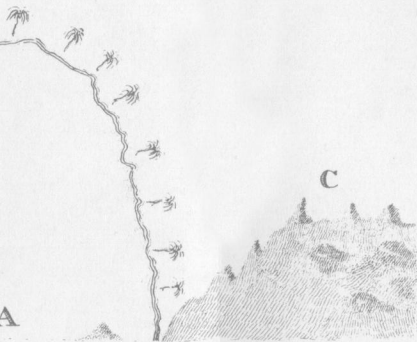


Fig. 4.





cape is high land, and may be seen in fair weather about 12 leagues.

N. B. When Cape Aden bore N. N. W. $\frac{1}{2}$ W. about 5 miles, I had 40 fathom, coarse sand and small shells, the opening of the small bay appeared like the narrow Streight of Babelmandel, N. W.

Thus sheweth Cape Aden C, when the opening A bears W. N. W. $\frac{1}{2}$ N. distance about 4 miles. Tab. V. Fig. 1.

Thus sheweth Cape Aden, when coming from the eastward, at the distance of about 7 leagues, and when it bears about W. by N. Fig. 2.

To give any directions for sailing through the narrow Streight of Babelmandel, and from thence to Mocha road, would be needless, as they are so extremely good in the East India Directory, as also for anchoring and sailing into the road, with proper bearings, and distance to anchor from the town.

Thus sheweth Cape Babelmandel, when it bears N. W. by W. distance 6 or 7 leagues, Fig. 3.

Thus sheweth Cape Aden, when it bears W. by N. 10 or 11 leagues, Fig. 4.

From Mocha towards Judda, the islands of Jebbel-Zeker Aloric are pretty large, and may be seen in clear weather 7 or 8 leagues; they are fix in number, the southernmost lies in the latitude of $13^{\circ} 45'$ N. and bears from Mocha N. W. by W. nearly, distance

about 40 miles. A little to the northward of those islands lies Jebbel-Zeker, a very high large island, that may be seen in fair weather 12 or 13 leagues. Very near this island, of the N. E. side, lie three small ones, not discernible at a distance of 4 leagues. The N. end of the large island Jebbel-Zeker lies in the latitude of $14^{\circ} 10' N$.

In coasting along the Arabian shore, abreast of the large island, care must be taken not to come too near the shore, as there is a shoal water, between the mosque of Cape Name and Cape Namel, 7 or 8 miles from the shore, and foul ground, with overfalls. The edge of this bank is very steep too; for when I was from the shore about the above distance, I had presently from 20 to 7 fathom water, and then 6 fathom. I immediately hauled off, and deepened my water again very soon, to 13, 14, and then 20 fathoms, as may be seen by the soundings in the draught, Tab. IV.

The true course from Jebbel-Zeker to the Suburgars is N. W. by N.; distance 20 leagues. Those islands are extremely well laid down in three different charts I have met with for the Red Sea; they trench away about N. N. W. and S. S. E. and extend from N. to S. about 20 miles; they are nine in number, and not very high, however, I believe they may be seen, in clear weather, from the mast-head 7 or 8 leagues; the latitude of the S. and N. ends $14^{\circ} 57'$ to $15^{\circ} 15' N$.

N. E. of those islands lies a low white island (which I call Sandy Island), environed all round with shoal water; to the southward of which, the shoal seemed, from the mast-head, to extend from the island 3 or 4 miles. I passed it at about 6 miles distance,

distance, and never had less than 26 fathom, sandy ground. Two or 3 miles within me, appeared like very shoal water. Its latitude is $15^{\circ} 22' N.$

About 40 miles N. N. E. from the Subugars, lies the Island Comoran, a very low blackish island, trenching away N.W. and S.S.E. excepting the north end, which turns off suddenly, and stretches away N. N. E. When at the distance of about 5 miles from this island, I had 23 fathom water, hard sand and gravel stones, at the same time it bore E. N. E. and, when the body bore N. E. distance about 6 miles, I saw a large square white house near the waterfide.

N. W. by N. by the compass, from the Subugars, lies the Island Jebbel-Tar, distance about 25 miles. This island is of a moderate height, and may be seen 9 or 10 leagues from the mast-head, in clear weather; its latitude is about $15^{\circ} 36' N.$ and when it bore W. about 10 miles, I had 33 fathom water, a sandy bottom.

After taking your departure from this island, when bound to Judda, the best course to steer is N. N. W. $\frac{1}{2}$ W. which is near the mid channel; by so doing, you may run boldly on all night, without fear.

From Jebbel-Tar to the small islands on the Arabian side, laid down in about $18^{\circ} N.$ latitude, I made the course N. $22^{\circ} 49'$, W. distance 159 miles. It was about sun-set when I first saw two of those islands; they then bore from N. E. to S. E. by S. distance from the nearest of them about 6 miles, and breakers a little to the southward about 5 miles. The southernmost of these islands lies in the latitude of $18^{\circ} 2' N.$ according to my bearing and distance at

sun-set; they are very low, but long, and stretch to the northward; I had no soundings, 80 fathom at the above distance.

From the above islands I saw no dangers, till I was in the latitude of $19^{\circ} 24'$ N. (upon the Ethiopian shore), when I saw breakers; and a little to the N. W. of them I saw a low sandy island, that cannot possibly be seen at a greater distance than 6 or 7 miles; at the same time I saw two high islands to the west and northward of them, distance 8 or 10 leagues.

And, upon the eastern or Arabian shore, in the latitude of $20^{\circ} 14'$ N. I saw a low small sandy island; and 3 or 4 miles farther to the northward, another low sandy island, about the size of the former, neither of which can be seen, in clear weather, at a greater distance than 3 leagues. At the same time, a little to the northward and westward withal, I saw breakers very plain from the ship's deck; those islands were called (by the pilot I had on board) Marfaharam; he at the same time informed me, that it was very dangerous to go to the eastward of them, it being nothing but shoals and rocks. When you are to the northward of these islands and breakers, you will see the high land of Goofs, at the distance of 14 leagues, the approaching of which is very dangerous without a pilot, as well as all the rest of the coast quite to Judda, it being so incumbered with rocks and shoals; and what makes it the more hazardous is, there being no soundings till you come at once upon a hard steep sand-bank, or a ledge of rocks; therefore, it will be absolutely necessary to take a pilot on board, in or about 20° N. latitude, if possible; but should you not be so fortunate

fortunate as to get one before you come near Judda, it would be most certainly prudent to keep 30 or 40 miles from the shore, at least so far that you can but just discern the high land of Goofs and Gedan, at which distance there is no danger. Although this may appear a great distance for the pilots to come off to the ship, yet they will immediately do it as soon as they hear your gun, and not till then.

It is indeed amazing, and almost incredible to be told, how far these pilots will hear the guns on a still morning or evening, which are the proper times for the guns to be fired. Observe to fire the first as soon as you see the sun appear in the horizon, and the second as soon as the lower limb is just out of the water; in the evening, the first as soon as the lower limb touches the water, and the second when the upper limb is below the horizon. Four firings in one day is all that are necessary; but they are to be repeated every day till you get a pilot. They know pretty near the time the India ships will arrive, and go down to the water side every night and morning, and just as the sun is rising or setting, they lay their ear close to the ground for three or four minutes, and pretend to say, that if a ship is not more than two or two and a half degrees distance when the gun is fired, they can either hear the report or find the ground shake under them; upon which they take a boat and come off to pilot you in. This may seem a little extraordinary to a person that never was there; but, however strange it may appear, I was assured by a gentleman of undoubted veracity, that he run by the log 95 miles from the time of firing his two guns in the morning, till he saw the pilot in the evening; and when he
came

came on board, he declared that he heard the two guns that morning at sun-rising, upon the strength of which, he took his boat and put off.

To sail into Judda harbour, or rather road, without a pilot, would be impossible for a stranger, there being so many sand-banks and shelves of rocks; but when you are in, it is one of the safest places that can possibly be; you may make your ship fast with any old junk, and there is no danger, though you are surrounded with nothing but rocks and sands.

The best bearing for anchoring is the great Mosque E. by S. and the extremes of the land from S. by E. to N. N. W. distance from the landing-place about two miles.

Latitude of Judda	21° 28' " N.
Longitude Ditto	39 26 45 E.
Variation of the compass	11 52 W.

I left Judda the 30th of July 1769, and passed by the grap shoals (lying in the latitude of 21° 20' N.) at about a mile's distance, from which I took my departure and made my course the first day S. 24° W. dist. 56 miles; the second day, S. 15° E. dist. 100 miles. On the third day about 6 o'clock in the afternoon I saw a very high land on the Ethiopian shore (about the latitude of 18° 38' N.) and some small islands a little to the Northward of it; the high land bore about W. N. W. and the small islands N. W. dist. from the high land about 10 leagues; we had then run from the Grab shoal 195 miles.

From

From the ship's place at 6 P. M. run about 68 min. S. S. E. by the compass, and then made a low long sandy island bearing S. W. about 8 miles on the same shore, on the South end of which are breakers that may be seen 8 or 9 miles; the middle of this island lies in or near the latitude of $16^{\circ} 42'$ N. from thence to Jebbel-Tar the distance is 128 miles, in a direct S. E. course by the compass.

Thus sheweth the island of Jebbel-Tar, when it bears W. by S. dist. about 10 miles; Tab. V. fig. 5.

From Jebbel-Tar to Jebbel-Zeker, the course is by the compass S. E. by S. distance about 100 miles: the passage to the Westward of it I had been informed was a very good one, but I find by experience it is not so good as that to the Eastward of it; nor do I think it so safe to go that passage in the night, except you are close to the island before it is dark, and well to the Southward of the large Jebbel-Zeker, so that you can see the Southernmost of the small Jebbel-Zeker Alories, as I found a very strong current setting upon the Abyssinian shore, and to the Southward withal. On the evening of the 4th of August at sun-set, the large Jebbel-Zeker bore E. by S. distance about 4 leagues, and the Southernmost one S. S. E. half E. Having a very fine wind, and wanting to be at Mocha very much, I carried a moderate sail, and steered from sun-set till 8 o'clock South about 7 miles, from 8 till 10 S. by E. 7 miles, from 10 till 12 S. S. E. 7 miles, and then bore away, concluding myself well to the Southward of all the islands of Jebbel-Zeker Alorie; and indeed had my draught been good, and had I met with no current, I should have been clear of every thing according to
my

my run, which gave me about 5 miles to the Southward of the Southernmost Jebbel-Zeker; but to my great surprize, just as I was bearing away, I saw two islands right a-head, within about half a mile of us. We were then going at the rate of 4 knots: I immediately hauled off to the S. W. and soon after S. till I thought we were quite clear, and then (about two o'clock) going to bear away a second time, we discovered two very small islands, less than a mile from us, right a-head, upon which I shortened sail, and laid the ship's head to the Westward till day-light, when I perceived myself surrounded with a parcel of small islands (not laid down in any chart), about half way between Jebbel-Zeker Alories and the Abyssinian shore. It falling little wind, and the current driving me very fast upon the Abyssinian shore, I let go my anchor in 27 fathom sandy bottom, and there laid till 10 in the morning, when a breeze of wind sprung up from the Northward; I then immediately hove up my anchor, and stood over for Mocha steering N. 77° E. distance 39 miles: when at anchor, I was about 3 miles from the Abyssinian shore, and about half a mile from a large rock, or rather a small island. While I was among these islands, I saw no breakers or shoal water; the least water we had was 27 fathom, and never more than 40 fathom, and mostly sandy ground. Most of these small islands I have marked in my chart, pretty near as they bear from each other; the distance from the Abyssinian to the Arabian shore is not more than 40 or 45 miles (about the latitude of 13° 25' N.) though in most charts it is made to measure from 70 to 80 miles, which certainly must be a great deal

too much; for, supposing an error in my run from shore to shore 10 miles, it would only make the distance 50 miles, which is 25 or 30 miles less than the charts give.

Latitude observed at Mocha	13° 23' N.
Variation of the compass	12° 33' W.